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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/714,292	11/13/2003	James D. Osterloh	14542	2131

7590 12/20/2005

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EXAMINER	
ZACHARIA, RAMSEY E	
ART UNIT	**PAPER NUMBER**
1773	

DATE MAILED: 12/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/714,292	OSTERLOH, JAMES D.	
	Examiner	Art Unit	
	Ramsey Zacharia	1773	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 October 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 and 3-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 and 3-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *22 April 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Specification

2. The amendment filed 04 October 2004 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: the chemical formula "$[[-CF_2-CFCl-]_n[-CF_2-CH_2-]_m]_z$" in the fourth entry of the table on page 6. No support for the copolymer represented by $[[-CF_2-CFCl-]_n[-CF_2-CH_2-]_m]_z$ could be found in the disclosure as originally filed. It is noted that ACLAR® is a trade name designating polychlorotrifluoroethylene, i.e. a polymer of formula $[-CF_2-CFCl-]_n$. See the attached entry for polychlorotrifluoroethylene in Alger, *Polymer Science Dictionary*.

Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 13 and 14 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. This is a new matter rejection. No support could be found in the disclosure as originally filed for a polymer represented by the formula $[[-CF_2-CFCl-]_n[-CF_2-CH_2-]_m]_z$.

Claim Language

5. For the purpose of applying prior art to claims 13 and 14, ACLAR® CTFE is taken to have the chemical formula $[[-CF_2-CFCl-]_n[-CF_2-CH_2-]_m]_z$.

Claim Rejections - 35 USC § 102

6. Claims 1, 3-12 and 17 are rejected under 35 U.S.C. 102(e) as being anticipated by Araki et al. (U.S. Patent 6,716,497) as evidenced by the MatWeb Material Data Sheet for ETFE.

Araki et al. teach a transparent, scattering-preventing composite for use as windows and the like (column 1, lines 6-20). In one embodiment, the composite comprises a fluorine-containing primer layer applied to a substrate and a top layer over the primer of a fluorine-containing polymer having no functional groups (column 13, lines 30-43). The fluorine-containing polymer having no functional groups may be PFA, FEP, or ETFE (column 14, lines 7-9). According to the Table on page 6 of the instant application, PFA corresponds to the material of claims 11 and 12, FEP corresponds to the material of claims 9 and 10, and ETFE

corresponds to the material of claims 5-8. The substrate may be a synthetic polymer, such as polycarbonate (column 17, lines 33-35).

Regarding claims 7 and 8, ETFE is taken to inherently have the appropriate n value since it has a density of 1.7 to 1.72 g/cc and a tensile strength of 5800 to 6820 psi (see the attached MatWeb Material Data Sheet for ETFE).

Regarding claim 17, all polymers, including polycarbonate, are taken to be flexible since the claim does not require any specific modulus or degree of flexibility.

Claim Rejections - 35 USC § 103

7. Claims 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Araki et al. (U.S. Patent 6,716,497) in view of Friedman et al. (US 2003/0162028).

Araki et al. teach all the limitations of claims 13-16, as outlined above, except for the use of the polymers recited in claims 13-16 in the top layer of their scattering-preventing composite. However, Araki et al. do cite PFA, FEP, ETFE, PVdF and VdF copolymers as examples of polymers to be used in the top layer (column 14, lines 7-9).

Friedman et al. is directed to a safety glazing laminate comprising a fluoropolymer layer (paragraph 0001). The fluoropolymer used may be FEP, PFA, ETFE, ECTFE, PCTFE, PVdF, or a copolymer of VdF (paragraph 0059).

That is, Friedman et al. show that fluoropolymers FEP, PFA, ETFE, ECTFE, PCTFE, PVdF, and VdF copolymer are known in the art as functionally equivalent fluoropolymer materials for safety glazings. Therefore, because these fluoropolymers were art-recognized equivalents at the time the invention was made, one of ordinary skill in the art would have found

it obvious to substitute ECTFE or PCTFE for the PFA, FEP, ETFE, PVdF or VdF taught by Araki et al.

Regarding claims 13 and 14, PCTFE is the generic name of ACLAR®, which meets the limitations of these claims for purposes of applying prior art as noted above in paragraph 5.

8. Claims 18-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Delnay et al. (U.S. Patent 3,410,619) in view of Araki et al. (U.S. Patent 6,716,497).

Delnay et al. is directed to a glovebox, i.e. a chemical laboratory reaction enclosure (column 1, lines 12-19). The glovebox comprises windows made from any high strength, transparent, chemically inert material, such as safety glass (column 4, lines 20-27).

Delnay et al. do not teach the composition of the safety glass.

Araki et al. teach a transparent, scattering-preventing composite for use as windows and the like, i.e. safety glass (column 1, lines 6-20). In one embodiment, the composite comprises a fluorine-containing primer layer applied to a substrate and a top layer over the primer of a fluorine-containing polymer having no functional groups (column 13, lines 30-43). The composite also has excellent heat and chemical resistance (column 14, lines 2-6). The fluorine-containing polymer having no functional groups may be PFA, FEP, or ETFE (column 14, lines 7-9). According to the Table on page 6 of the instant application, PFA corresponds to the material of claims 11 and 12, FEP corresponds to the material of claims 9 and 10, and ETFE corresponds to the material of claims 5-8. The substrate may be a synthetic polymer, such as polycarbonate (column 17, lines 33-35).

One skilled in the art would be motivated to use the composite of Araki et al. as the window in the glovebox of Delnay et al. because, in addition to being safety glass, the composite has excellent heat and chemical resistance. Thus the use of this composite would improve the overall heat and chemical resistance of the glovebox.

Regarding claims 22 and 23, ETFE is taken to inherently have the appropriate n value since it has a density of 1.7 to 1.72 g/cc and a tensile strength of 5800 to 6820 psi (see the attached MatWeb Material Data Sheet for ETFE).

Response to Arguments

9. Applicant's arguments filed 04 October 2005 have been fully considered but they are not persuasive.

Regarding the rejections over Araki et al., the applicant argues that the claims are drawn to polymer sheets as the substrate and second layer as opposed to Araki et al. which describes film such as granulated polymers spray or electrostatically applied to a substrate.

This is not persuasive for the following reasons. First, the instant invention makes no distinction between a film and a sheet. For example, the first paragraph on page 3 includes this description of an embodiment of the instant invention:

> "...this may vary from a single sheet of substrate bonded to a single sheet of fluorocarbon polymer film..."

The explicit reference to "a sheet of fluorocarbon polymer film" demonstrates that there is no difference between a sheet and a film. Moreover, Araki et al. do not require their fluoropolymer layers (either primer or top coat) to be applied as a granulated polymer. Rather, Araki et al.

explicitly discloses that the layers may be applied as preformed layers (see column 15, lines 23-45 and column 16, lines 9-14).

The applicant further argues that Araki et al. teach away from the disclosed invention because Araki et al. (at column 3, lines 1-14) teach that a composite material produced using an adhesive is insufficient in heat resistance, chemical resistance, and water resistance, cannot maintain adhesive force, and lacks reliability.

This is not persuasive because the passage cited in Araki et al. is referring to a usual hydrocarbon, non-fluorine containing, adhesive. This is in contrast to the material used by Araki et al. as a primer which is fluorinated and is designed to overcome these problems associated with the prior adhesives. See column 3, lines 49-60.

In view of the amendments to claim 1 incorporating the limitations of original claim 2 (and an analogous amendment to claim 18) the rejections over Friedman et al. put forth in the prior Office action are withdrawn.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ramsey Zacharia whose telephone number is (571) 272-1518. The examiner can normally be reached on Monday through Friday from 9 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney, can be reached at (571) 272-1284. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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